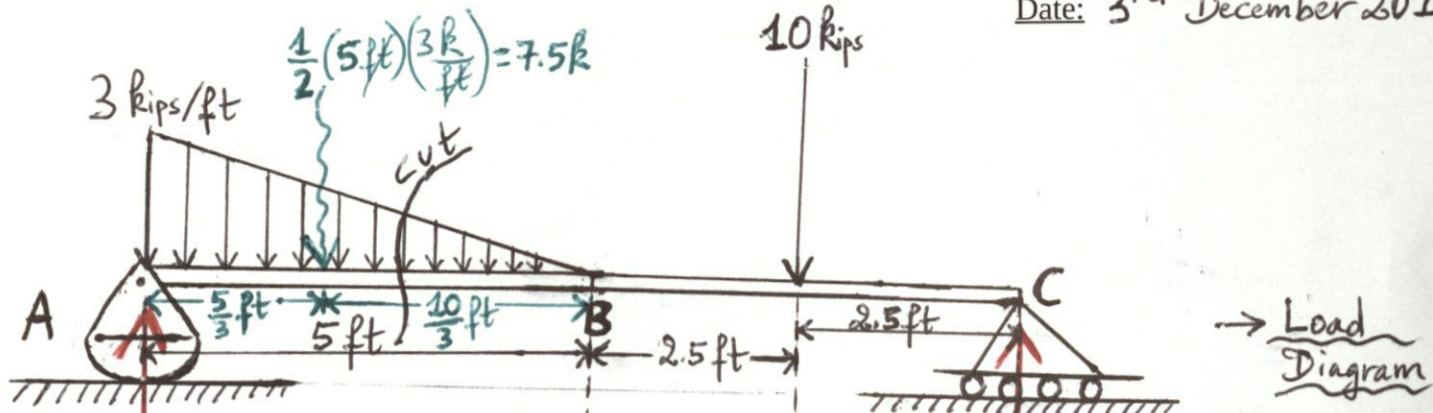


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$A_y = 8.75R$

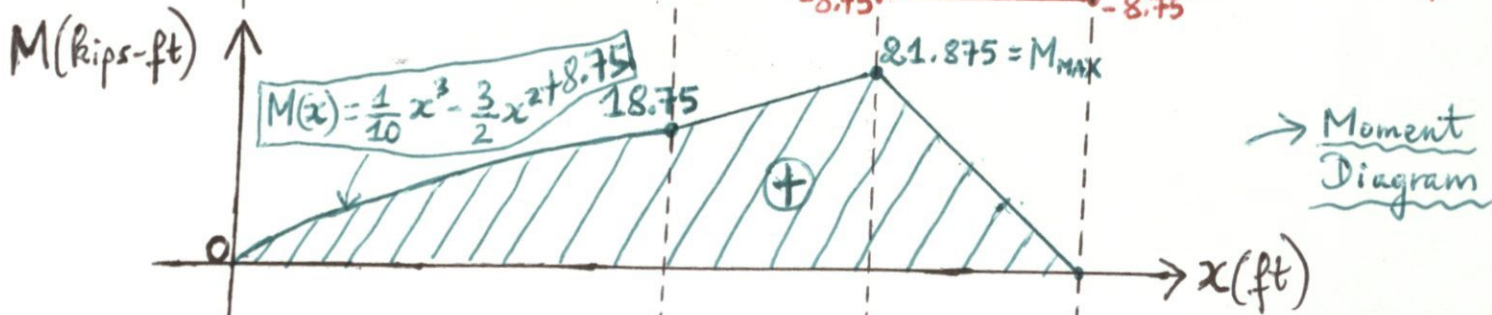
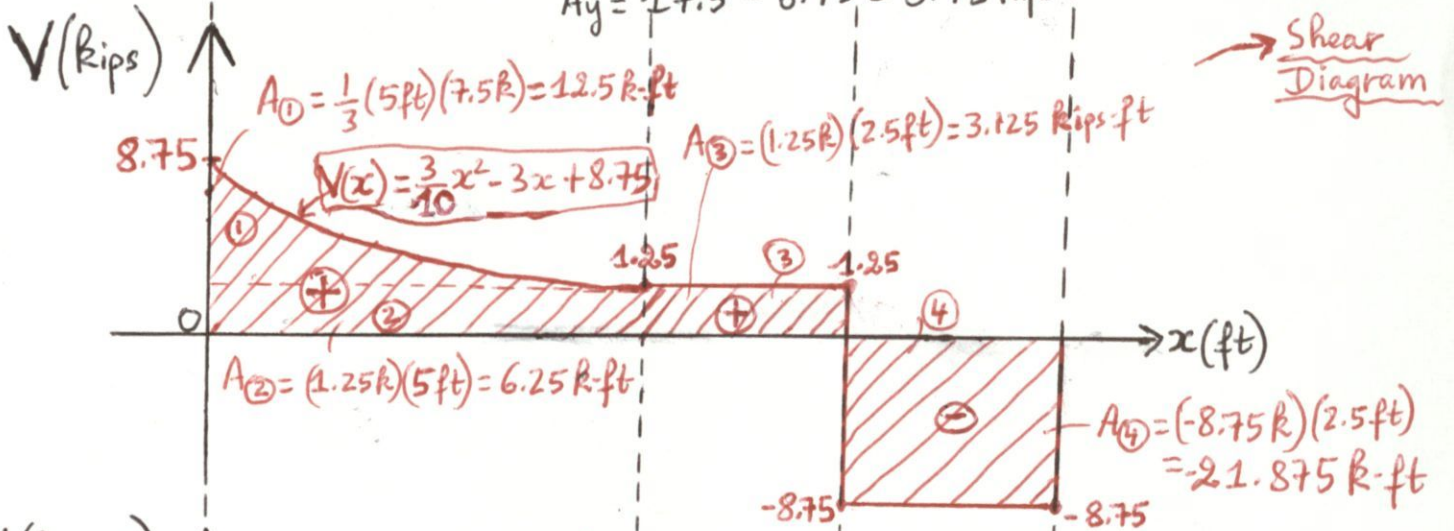
$$+\uparrow \sum M_A = 0; (-7.5R) \left(\frac{5}{3} \text{ ft}\right) + (-10R)(7.5 \text{ ft}) + (C_y)(10 \text{ ft}) = 0$$

$$C_y = 8.75 \text{ Rips}$$

$C_y = 8.75R$

$$+\uparrow \sum F_y = 0; A_y + C_y = 10R + 7.5R$$

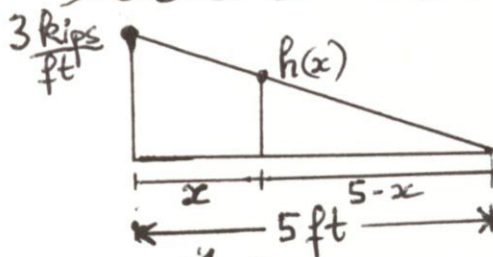
$$A_y = 17.5 - 8.75 = 8.75 \text{ Rips}$$



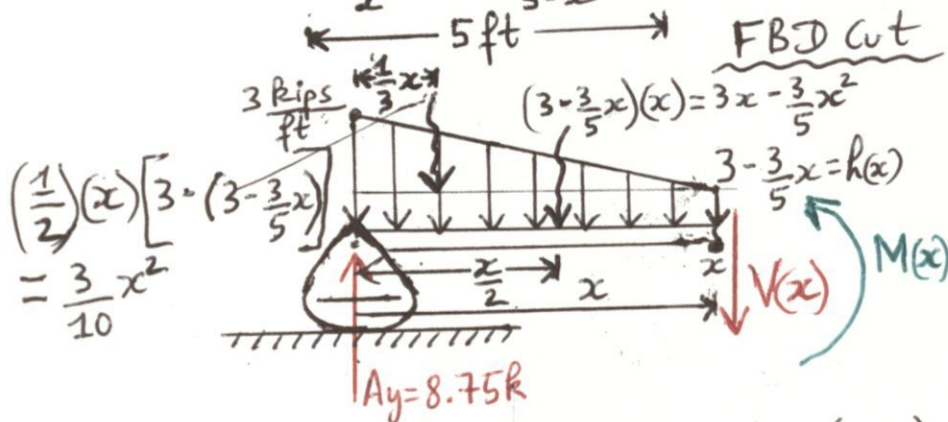
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Find $M(x)$ & $V(x)$ for triangular load from: $0 < x \leq 5$ ft

Using similar triangles, find $h(x)$



$$\Rightarrow \frac{3 \text{ kips/ft}}{5 \text{ ft}} = \frac{h(x) \text{ kips/ft}}{(5-x) \text{ ft}} \Rightarrow h(x) = \frac{3}{5}(5-x) = 3 - \frac{3x}{5}$$



$$+\downarrow \sum F_y = 0; \quad V(x) + (3x - \frac{3}{5}x^2) + (\frac{3}{10}x^2) = 8.75 \text{ k}$$

$$V(x) = \frac{3}{10}x^2 - 3x + 8.75$$

$$+\curvearrowleft \sum M_x = 0; \quad (3x - \frac{3}{5}x^2)(\frac{x}{2}) + (\frac{3x^2}{10})(\frac{2}{3}x) + (-8.75 \text{ k})(x) + M(x) = 0$$

$$M(x) = \frac{1}{10}x^3 - \frac{3}{2}x^2 + 8.75x$$